Rule WLM016: Low velocity goal was specified for server service class

Finding: CPExpert noticed that a low velocity goal was specified for a service class that was a "server" service class.

Impact: This finding should be viewed as generally having a LOW IMPACT on the performance of the workload involved. This finding may have a HIGH IMPACT during address space start-up or shutdown.

Logic flow: This a basic finding. There are no predecessor rules.

Discussion: If subsystems are installed which support Workload Manager reporting (e.g., CICS/ESA Version 4.1 or IMS/ESA Version 5), installations can define service classes which describe particular transaction types and specify performance goals for the transactions in the service class. All transactions entering the system which fall into the workload category described by the service class are associated with the service class.

For example, an installation may wish to group all CICS transactions relating to personnel matters into a CICSPERS Service Class. The installation would define classification rules to the Workload Manager so all transactions relating to personnel matters would be placed into the CICSPERS Service Class. The installation would specify a performance goal for the CICSPERS Service Class, and an importance level for the goal.

The CICS region would report transaction performance information to the Workload Manager, and the Workload Manager would attempt to manage system resources to meet the performance goal specified for the CICSPERS Service Class.

The controlling address space must be in its own service class. In our example, suppose that the CICS region is placed into the CICSRGN Service Class. The CICSRGN Service Class would be considered a "server" and the CICSPERS Service Class may be one of several "served" service classes controlled by the CICSRGN Service Class (other CICS service classes "served" by the CICSRGN "server" may be related procurement, administration, miscellaneous, etc.).

The CICSRGN will have its own performance goals and importance. However, these performance goals and importance normally are used by the Workload Manager **only at address space start-up** time. After the

CICS region has started, its performance goals and importance **normally** are ignored by the Workload Manager. The Workload Manager will allocate resources based upon the performance goals and importance of the "served" service classes (in our example, the allocation will be based upon the performance of the CICSPERS transactions, and other "served" service classes served by the CICSRGN Service Class)[1].

Of particular importance to this finding is the fact that the Workload Manager **does** use the performance goal for the server service class during address space start-up (and may use it during address space shutdown), and may use the performance goal if the server should become idle for an extended period of time. The actual value specified for the goal **is important** during these intervals. You may experience serious performance problems during start-up of a CICS region (and potentially during region shutdown) if an inappropriate goal is specified for the server service class. Consequently, you should not specify a low execution velocity for the service class describing a server.

CPExpert produces Rule WLM016 when less than 30% was specified as an execution velocity goal for a **server** service class.

The following example illustrates the output from Rule WLM016:

```
RULE WLM016:  LOW EXECUTION VELOCITY GOAL SPECIFIED FOR SERVER.

  CPExpert noticed that a relatively low execution velocity was specified
  for a service class that was a "server" for subsystem transactions (that
  is, the service class is a CICS region or IMS region).  A low execution
  velocity for a server may delay the start-up or shutdown of the address
  space.  You may wish to specify a higher execution velocity for the
  CICSTEST Service Class.
```

Suggestion: CPExpert suggests that you specify a larger execution velocity performance goal for the server service class identified by this rule.

As mentioned above, the performance goal has little effect since it applies only at address space start-up. After the CICS region has started, its performance goals and importance are ignored by the Workload Manager. The Workload Manager will allocate resources based upon the performance goals and importance of the "served" service classes.

[1]If the CICS region should become idle for an extended period (no transactions executed in the "served" service classes), the Workload Manager would use the service goal and importance specified for the CICS region service class to manage the region. Practically, of course, there would be little to manage with an idle region.

You may wish to specify a relatively high execution velocity goal to ensure rapid start-up of the CICS region. This relatively high execution velocity goal should be specified even if the transactions served by the server might be assigned a relatively low response goal.

Reference: MVS Planning: Workload Management

MVS/ESA(SP 5):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V1R1):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V1R2):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V1R3):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R4):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R5):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R6):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R7):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R8):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R9):	Chapter 8: Defining Service Classes and Performance Goals
OS/390 (V2R10):	Chapter 8: Defining Service Classes and Performance Goals
z/OS (V1R1):	Chapter 8: Defining Service Classes and Performance Goals
z/OS (V1R2):	Chapter 8: Defining Service Classes and Performance Goals
z/OS (V1R3):	Chapter 8: Defining Service Classes and Performance Goals
z/OS (V1R4):	Chapter 8: Defining Service Classes and Performance Goals

"Migrating to the MVS Workload Manager", Peter Enrico (IBM Corporation Workload Manager developer), 1995 SHARE Winter Meeting

